

Appendix D

Northern Michigan Tornadoes by County

The following data details tornadoes on a county by county basis. The tornadoes are listed in chronological order from the oldest reports to the most recent. Information regarding the time of tornado occurrence, tornado intensity, beginning and ending latitude and longitude coordinates for the tornado path, casualties in terms of deaths and injuries, estimated property damage, length and width of the tornado path, and a description of the event. All times are based on a 24 hour clock and in Eastern Standard Time (for example a tornado occurring at 2:14PM in July would be shown as 1314, adding 12 and subtracting 1 hour from Daylight Saving Time. The narrative text listed below each date, describes the damage or impact of the tornado. Several tornadoes have no text available, though several attempts were made to locate information regarding these events.

ALCONA COUNTY (10)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 6/08/53 | 2008 | F3 | 44/49'N / 83/28'W | 0 | \$250K | 2mi long, 100yd wide* Moved east, passing 1mi south of Spruce. 5 large barns destroyed and livestock killed. (Per local newspaper article) Tornado started near Indian Lake. Leveled a store and four dwellings; traveled through Wilbor District leveling two dwellings and everything else in it's path. Continuing in a NE direction passing over the lake at Wabun. In Caledonia Twp. 5 barns, tore up orchards and other trees. Traveled in a westerly direction hitting barns but missing homes. Path was about 100 yards at the widest following county east to west road 1 mile south of Spruce Road. |
| 7/05/53 | 1700 | F0 | 44/34'N / 83/43'W | 0 | \$0.3K | |
| 8/09/54 | 1545 | F1 | 44/35'N / 83/20'W | 0 | \$25K | (Per local newspaper article) 2 ½ miles south of Greenbush, east shore of Cedar Lake. Tore up trees and damaged several docks, turned to the east and hit an area of about 2 blocks along US 23. Large trees broken or uprooted, car destroyed by fallen trees. Boat picked up - traveled 200 feet into side of neighbor's cottage. |
| 7/01/56 | 1450 | F1 | 44/48'N / 83/32'W | 0 | \$2.5K | 1mi long, 33yd wide (Per local newspaper article) 70x45 ft. Drive-in Theater screen toppled - concrete moorings (6 feet in ground) were ripped out. Ticket booth moved 6 inches, 20x20 foot sign leveled. |
| 7/22/67 | 1855 | F1 | 45/04'N / 83/26'W | 0 | \$2.5K | (Per local newspaper article) Large section of cement block garage blown in, fences leveled. |
| 3/30/76 | 1520 | F2 | 44/36'N / 83/41'W 44/36'N / 83/41'W | 0 | 0 | 5mi long, 150yd wide |
| 3/27/91 | 1835 | F3 | 44/30'N / 83/41'W 44/37'N / 83/19'W | 0 | \$2.5M | 23mi long, 100yd wide* Moved NE from 1mi W of Sage Lake, passing 3mi N of Hale, ending 2mi S of Harrisville near the Lake Huron |

shore. The tornado was on the ground about 60% of the time, destroying several homes and many trees.

(Per local newspaper article) Hale northeast, Five Channels area, Mikado, Harrisville, East at Springport and out to the lake. One mobile home destroyed, roof of another, barn, numerous sheds and storage buildings, countless trees. Large pines uprooted and downed in cemetery. Heavy damage to several residences, enclosed porch torn off and destroyed in Glennie. In North Lake - Hundreds of trees toppled or twisted. Pontoon boat picked up and smashed onto ice. Timber and metal roof of large tile barn entirely destroyed. Truck windows blown out - vehicle sent "flying and spinning" into swamp. In Spruce, two barns destroyed and power poles snapped off 6 feet from ground.

| | | | | | | |
|---------|------|----|-------------------|---|--------|------------------------|
| 3/27/91 | 1840 | F3 | 44/30'N / 83/48'W | 0 | \$2.5M | 10mi long, 100yd wide* |
| | | | 44/39'N / 83/33'W | | | |

Moved NE from Trout Lake, passing 0.5mi E of Glennie, and ending 3mi SE of Barton. Homes were destroyed E of Glennie. Cars and farm vehicles were crushed by trees.

| | | | | | | |
|---------|------|----|-------------------|---|-------|---------------------|
| 6/17/92 | 1640 | F1 | 44/36'N / 83/26'W | 0 | \$25K | 1mi long, 50yd wide |
|---------|------|----|-------------------|---|-------|---------------------|

(Per local newspaper article) Roof torn off, barn well house and shed destroyed. Several trees crashing on buildings and vehicles.

| | | | | | | |
|---------|------|----|-------------------|---|--------|----------------------|
| 7/03/99 | 1848 | F1 | 44/45'N / 83/50'W | 0 | \$250K | 12mi long, 60yd wide |
| | | | 44/41'N / 83/36'W | | | |

Continuation of Oscoda County tornado. Hundreds of trees down and 16 homes damaged. A thunderstorm developed rapidly over the city of Gaylord around 7 pm. The storm brought only very heavy rains to the city of Gaylord, then raced southeast toward Lewiston. By 720 pm, the storm was moving at 50 mph and strong rotation was noted, prompting a Tornado Warning. An F1 tornado formed just minutes after passing southeast of Lewiston. It then moved out of Montmorency county into Oscoda county. By 732 pm, the storm strengthened to an F2 and reached the city of Comins, cutting it in two. It completely destroyed a Parsonage, Mennonite Church, Township Hall, Fire Department and Post Office within the town of Comins. The storm also destroyed 10 homes and damaged 45 others, in addition to destroying 4 businesses and damaging 4 others. The park facilities on the east side of Comins also sustained substantial damage. The tornado continued out of Comins as an F1, continuing into Alcona county where 16 homes were damaged along the path from the county line to Barton City. The tornado lifted in the vicinity of Barton City around 8 pm. Extensive tree damage was also noted along the 20 mile damage path of the tornado, with path widths ranging from 60 to 120 yards.

ALPENA COUNTY (11)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|----------------------|
| 8/05/61 | 1139 | F0 | 45/07'N / 83/30'W | 0 | 0 | |
| 7/20/64 | 1915 | F1 | 44/52'N / 83/36'W | 0 | \$25K | 1mi long, 33yd wide |
| 6/07/71 | 1435 | F1 | 45/04'N / 83/27'W | 0 | 0 | 0mi long, 50yd wide |
| 4/19/80 | 1800 | F0 | 45/10'N / 83/19'W | 0 | \$0.3K | |
| 6/21/82 | 1830 | F0 | 44/53'N / 83/48'W | 0 | \$0.3K | 1mi long, 30yd wide |
| 8/12/88 | 1350 | F1 | 45/04'N / 83/44'W 45/03'N / 83/47'W | 0 | \$25K | 3mi long, 70yd wide |
| 8/16/88 | 0845 | F0 | 44/53'N / 83/35'W | 0 | \$0.3K | 0mi long, 10yd wide |
| 9/03/88 | 1515 | F0 | 45/10'N / 83/35'W | 0 | 0 | 0mi long, 10yd wide |
| 6/17/92 | 1605 | F1 | 44/51'N / 83/45'W | 0 | \$25K | 1mi long, 50 yd wide |
| 6/17/92 | 1605 | F1 | 44/51'N / 83/46'W | 0 | \$25K | 0mi long, 50yd wide |
| 6/09/01 | 1726 | F0 | 45/05'N / 83/34'W 45/05'N / 83/34'W | 0 | 0 | 0mi long, 10yd wide |

ANTRIM COUNTY (6)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|-------------------------|--|------------|---------------|---|
| 7/16/58 | 2000 | F1 | 45/00'N / 85/12'W | 0 | 0 | 0mi long, 73yd wide |
| 7/03/74 | 2115 | F3 | 45/05'N / 85/06'W 45/04'N / 84/51'W | 2inj | \$250K | 12mi long, 67yd wide |
| 7/31/77 | 0155 | F2 | 45/03'N / 85/16'W 45/06'N / 84/57'W | 0 | \$0.3K | 16mi long, 200yd wide |
| 9/07/85 | 1720 | F1 | 45/03'N / 85/04'W 45/01'N / 85/00'W | 0 | 0 | 2mi long, 27yd wide |
| 7/08/90 | 1830 | F1 | 44/51'N / 85/21'W 44/56'N / 85/15'W | 0 | 0 | 12mi long, 30yd wide |
| 8/04/95 | 0030 | F0(WS) 3mi N Elk Rapids | | 0 | 0 | 0mi long, 10yd wide A waterspout came ashore with enough force to break some six inch limbs out of some trees. Some minor roof damage was also noted on one house. The tree damage was between two houses and the track was less than 0.1 mile long. The waterspout dissipated quickly after coming on shore. No convective activity was observed, by any radar, in northern lower Michigan during that night. |
| 5/31/98 | 0435 | F0 | 45/04'N / 85/22'W 45/04'N / 85/22'W | 0 | 0 | 0mi long, 30yd wide |

ARENAC COUNTY (5)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|----------------------|
| 7/04/77 | 2115 | F2 | 44/03'N / 83/41'W | 1inj | \$250K | 3mi long, 90yd wide |
| 7/08/77 | 1210 | F1 | 44/09'N / 83/56'W | 1inj | \$25K | 2mi long, 40yd wide |
| 4/24/93 | 1822 | F2 | 44/09'N / 84/08'W 44/13'N / 83/55'W | 3inj | \$50K | 7mi long, 440yd wide |

A tornado touched down in Alger in extreme northwest Arenac County around 1822 EST. The tornado moved northeast and lifted briefly after crossing Highway M-33. The tornado touched down with greater strength just before crossing into Ogemaw County where the Rifle River crosses the Ogemaw/Arenac County line. The tornado then moved into Mills Township/Skidway Lake through a subdivision comprised mainly of mobile homes and cottages, reaching F2 strength. It lifted briefly, about 0.75 mile northeast of the river, then touched down again and traveled another 6 miles, moving out of dense woods and into mostly open fields. A total of 17 mobile homes, 3 homes or cottages, 7 travel trailers, 4 garages, a barn, and 3 vehicles were destroyed or badly damaged. Six people, in 3 of the mobile homes that were completely destroyed were warned by the approaching roar, and in each case, took some action that ultimately saved their lives. Three were hospitalized with injuries. The tornado lifted just west of Prescott. Tree and power line damage occurred with the tornado itself, and up to 0.1 mile either side of the tornado path. Structure damage and personal property loss in Ogemaw County is estimated at around \$250,000, with another \$110,000 in tree damage or loss.

| | | | | | | |
|---------|------|----|-------|---|---|---------------------|
| 7/13/95 | 1615 | F2 | Alger | 0 | 0 | 0mi long, 10yd wide |
|---------|------|----|-------|---|---|---------------------|

A tornado was reported by a volunteer fireman near Alger. The tornado created a path five miles long near Forest Lake. Hundreds of trees, some several feet in diameter were uprooted. An estimated 40 to 50 homes were damaged along with several vehicles.

| | | | | | | |
|---------|------|----|--|------|---|----------------------|
| 7/02/97 | 1515 | F1 | 44/01'N / 83/41'W 44/03'N / 83/41'W | 1inj | 0 | 3mi long, 150yd wide |
|---------|------|----|--|------|---|----------------------|

The tornado touched down several miles south of Au Gres and then tracked northward into Au Gres where it dissipated. Three homes were destroyed and several others damaged to varying degrees. This was a strong F1 tornado.

| | | | | | | |
|---------|------|----|--|---|---|---------------------|
| 5/12/00 | 1538 | F0 | 44/07'N / 84/09'W 44/07'N / 84/09'W | 0 | 0 | 1mi long, 20yd wide |
|---------|------|----|--|---|---|---------------------|

A tornado briefly touched down in far northeast Gladwin County and crossed into Arenac County lifting near interstate 75. Thunderstorms developed across Northern Lower Michigan in unseasonably warm and humid air ahead of a strong cold front that was moving across the Great Lakes Region. Thunderstorms developed during the late afternoon and lasted through the evening. Most of these storms produced very heavy rain and hail. The heavy rainfall also produced some street flooding in the cities of Manistee and Cadillac. A few of these storms produced severe wind gusts. An isolated tornado was reported across the Gladwin-Arenac County line; however, the hail and flooding had the greatest impact.

BENZIE COUNTY (4)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|--|-------------|------------|--|----------------|---------------|------------------------|
| 4/03/56 | 1855 | F4 | 44/31'N / 86/05'W 44/43'N / 85/48'W | 2dead 24inj | \$250K | 19mi long, 400yd wide* |
| <p>13 homes destroyed along with at least twice that many barns. Moved NE from Portage Point to NW of Thompsonville. A couple died as the second floor was torn off their home. Homes were destroyed at Lake Ann, SE of Solon, and at Cedar Run. Barn leveled at Bear Lake.</p> <p>(Per local newspaper article) Uprooted trees, collapsed chimney, caused stove to explode. Portions of roof blown off. Trailer parked nearby hurled nearly 1/2 mile. Home and farm buildings reduced to splinters; home cleaned off foundation and scattered, home and barn destroyed. Turkey farm - major loss of turkeys. 2 miles east of Honor - home destroyed (lifted and deposited 1/4 mile away). 2 cottages damaged.</p> | | | | | | |
| 7/21/83 | 0930 | F1 | 44/39'N / 85/50'W | 0 | \$0.3K | 0mi long, 20yd wide |
| <p>(Per local newspaper article) Trees down; Roof torn off and several trees knotted.</p> | | | | | | |
| 6/26/86 | 1525 | F1 | 44/31'N / 85/56'W | 0 | \$2.5K | 1mi long, 20yd wide |
| <p>(Per local newspaper article) Thompsonville - trees uprooted, couple of mobile homes destroyed, 1 inch hail.</p> | | | | | | |
| 10/15/89 | 0830 | F1 | 44/42'N / 86/14'W 44/38'N / 86/03'W | 0 | \$25K | 12mi long, 20yd wide |
| <p>(Per local newspaper article) Roofs off buildings, bulldozed dozens of trees. 85 mph on a privately owned wind indicator. Garage (including foundation), carried off. Roof and shingles blown off. Roof plowed through lawn and landed 100 feet away.</p> | | | | | | |

CHARLEVOIX COUNTY (4)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|--|
| 6/19/55 | 1530 | F1 | 45/09'N / 84/55'W 45/11'N / 84/52'W | 0 | \$2.5K | 2mi long, 50yd wide |
| 7/31/77 | 0230 | F2 | 45/06'N / 84/57'W 45/08'N / 84/52'W | 0 | \$0.3K | 4mi long, 33yd wide |
| 8/21/89 | 0810 | F0 | 45/08'N / 85/00'W | 0 | \$0.3K | 1mi long, 50yd wide |
| 8/01/02 | 1158 | F1 | Boyne City | 0 | 0 | 1 mi long, 100yd wide The tornado developed as it exited Lake Charlevoix and produced a damaging tornado immediately inland. Numerous large trees were downed onto structures and vehicles. Roof damage was done to several buildings. |

CHEBOYGAN COUNTY (5)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 6/5/55 | 1700 | F0 | 45/31'N / 84/28'W | 0 | \$0.3K | 2mi long, 33yd wide |
| 10/2/70 | 1820 | F0 | 45/19'N / 84/37'W | 0 | 0 | 3mi long, 77yd wide |
| 8/16/78 | 0103 | F? | 45/34'N / 84/24'W | 0 | \$25K | 2mi long, 60yd wide Two barns on a farm were blown down. |
| 8/12/88 | 1336 | F1 | 45/18'N / 84/16'W 45/18'N / 84/20'W | 0 | 0 | 4mi long, 40yd wide |
| 8/01/02 | 1655 | F0 | Black Lake | 0 | 0 | 1 mile long, 20yd wide Tornado developed on the northwest side of Black Lake moved over Black Lake and dissipated. |

CHIPPEWA COUNTY (6)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|-------------------|------------|---------------|---|
| 07/12/72 | 1500 | F0 | 46/05'N / 84/04'W | 0 | 0 | Nearly a dozen trees were downed at random on a farm in north raber. |
| 8/05/77 | 1635 | F1 | 46/26'N / 84/14'W | 0 | \$25K | |
| 8/16/78 | 0206 | F1 | 46/23'N / 85/11'W | 0 | \$250K | 1mi long, 27mi wide A tornado moved a 68 foot mobile home 150 feet from its foundations and overturned it. Occurred 1 mile east of the Luce-Chippewa County line on M-28. A garage was destroyed as well. |
| 4/01/87 | 1345 | F0 | 46/30'N / 84/41'W | 0 | \$2.5K | 0mi long, 10mi wide A whirling white funnel ripped a trailer roof completely off 9 miles west of the Brimley bridge. The funnel was in contact with the ground which at that time was covered with snow. |
| 7/11/87 | 1630 | F0 | 46/26'N / 85/02'W | 0 | \$0.3K | 2mi long, 500yd wide Public reported a tornado in the Piatt Lake area. Damage included several large trees down, 1 van and 4 homes damaged. Wind gusts of 67 mph were reported at the airport in Sault Ste Marie, Ontario. |
| 7/12/87 | 1423 | F1 | 45/58'N / 84/00'W | 0 | \$0.3K | 5mi long, 40mi wide Tornado touchdown about 3 miles west of De Tour Village along M-134. Damage included several trees down and some minor roof damage. |
| 7/03/99 | 1000 | WS | Drummond Is | 0 | \$200K | Waterspout damaged boat house and storage building on a marina dock. |

CRAWFORD COUNTY (9)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 5/20/73 | 2000 | F2 | 44/36'N / 84/43'W | 0 | 0 | |
| 4/19/75 | 0155 | F2 | 44/46'N / 84/46'W | 14inj | \$250K | 2mi long, 77yd wide* Moved NE through the business district of Frederic. A store and 8 trailers were destroyed. About 16 other buildings were damaged. |
| 9/07/85 | 1905 | F1 | 44/46'N / 84/28'W | 0 | \$2.5K | 0mi long, 10yd wide |
| 7/09/87 | 1315 | F1 | 44/43'N / 84/38'W 44/48'N / 84/21'W | 0 | \$0.3K | 16mi long, 13yd wide |
| 8/30/93 | 1635 | F1 | 44/31'N / 84/42'W 44/34'N / 84/33'W | 0 | \$50K | 8mi long, 50yd wide |

A small tornado touched down 2 miles north of the Crawford-Roscommon County border and 1.5 miles west of Interstate 75 then moved northeast for just under 8 miles before lifting. It dropped a tree on a house at the initial touchdown location then moved northeast generally tree-topping and doing only minor damage until it crossed Interstate 75. After crossing Interstate 75 the tornado strengthened and began doing widespread tree damage. In the next 1.5 miles it destroyed nearly a thousand large hardwoods and pines damaged a travel trailer and outbuildings at one residence and damaged the roof of another then tore the roof off of a 12-X 60-foot mobile home. After passing the intersection of Johnson and Seven Mile Roads 5.5 miles northwest of the village of Roscommon it proceeded northeast through a heavily wooded area for nearly another 4 miles uprooting or snapping off well in excess of another thousand trees.

| | | | | | | |
|---------|------|----|-------------------|---|-------|----------------------|
| 7/05/94 | 1917 | F1 | 44/33'N / 84/46'W | 0 | \$50K | 6mi long, 150yd wide |
|---------|------|----|-------------------|---|-------|----------------------|

A tornado touched down in Beaver Creek Township just north of Seven-Mile Road, about 1.5 miles west of Military Road. It moved generally eastward, along the north side of Seven-Mile Road, doing widespread tree damage. At about the time the tornado crossed Military Road, it appears to have dissipated as another vortex from the same parent cloud formed just south of Seven-Mile Road. The newly strengthened tornado then continued its movement east, crossing the U.S. 27 expressway, damaging the roofs of three houses and blowing over numerous large trees before it lifted, just after crossing Interstate 75. In all, more than 1,000 trees were destroyed, and at least five residences suffered some degree of damage. The worst damage was done to a residence along South Grayling Road, where virtually all of the large oaks around the house were torn down, doing extensive roof damage estimated at around \$8,000. The tornado stripped bare the roof of an old motel just west of Old U.S. 27 Highway.

| | | | | | | |
|---------|------|----|--|---|---|----------------------|
| 7/02/97 | 1400 | F1 | 44/31'N / 84/30'W 44/30'N / 84/27'W | 0 | 0 | 3mi long, 150yd wide |
|---------|------|----|--|---|---|----------------------|

The tornado associated with this thunderstorm initially touched down in the far southeast corner of the county. The thunderstorm produced straight-line wind damage to trees along its entire path across the southern part of the county with tonadic damage first reported in far southeast portions of the county. The tornado briefly touched down and then lifted back up into the storm. This pattern of continuous straight line wind damage with occasional brief tornado touchdowns continued into Oscoda county as the storm tracked eastward. This was a strong F1 tornado.

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 5/31/98 | 0455 | F0 | 44/49'N / 84/42'W 44/49'N / 84/42'W | 0 | 0 | 0mi long, 30yd wide. The brief tornado touchdown heavily damaged 1 home. |
| 6/25/98 | 1947 | F0 | 44/40'N / 84/46'W 44/40'N / 84/46'W | 0 | 0 | 0mi long, 30yd wide. Brief tornado touchdown with no reported damage. |

EMMET COUNTY (5)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---------------------|
| 9/20/53 | 1800 | F1 | 45/22'N / 84/58'W | 0 | 0 | |
| 6/06/55 | 1500 | F1 | 45/22'N / 84/58'W | 0 | \$2.5K | 1mi long, 33yd wide |
| 7/04/57 | 1600 | F1 | 45/26'N / 85/00'W | 0 | \$25K | 6mi long, 33yd wide |
| 8/18/87 | 1900 | F0 | 45/25'N / 84/51'W | 0 | \$25K | 0mi long, 30yd wide |
| 8/14/96 | 1528 | F0 | 46/00'N / 84/80'W 46/00'N / 84/80'W | 0 | 0 | 0mi long, 5yd wide |

GLADWIN COUNTY (9)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|--|-------------|------------|--|------------|---------------|--|
| 6/07/55 | 1745 | F2 | 43/50'N / 84/29'W 43/53'N / 84/25'W | 0 | \$25K | 4mi long, 100yd wide* |
| Moved NNW, passing 1.5mi S of Beaverton. Barnes were leveled and a house was twisted on its foundation and unroofed. | | | | | | |
| 6/07/74 | 2000 | F1 | 43/57'N / 84/14'W | 0 | 0 | 0mi long, 13yd wide (Per local newspaper article) A tornado was reported to the Gladwin Sheriff's Department by a motorist after it raced through an area of woods on State Land in the southern part of Grim Township. Several trees were downed across the road blocking traffic. |
| 9/12/74 | 1730 | F1 | 43/52'N / 84/19'W | 0 | \$25K | (Per local newspaper article) Gladwin Sheriff's Deputies reported a 50 foot house trailer tipped over, and trees uprooted in the Albright Shores vicinity. Eyewitnesses saw a tornado touch the ground, strike the trailer, cross the river and knock down several trees on the other side of the river. A boat and dock were smashed by the tornado. Two houses near the fallen trees received minor damage. |
| 5/21/75 | 1400 | F2 | 44/01'N / 84/31'W | 0 | \$2.5K | 2mi long, 33yd wide (Per local newspaper article) Several Gladwin area residents reported sighting a mid-afternoon tornado that passed over the Gladwin Nursing Home and struck a barn on Pratt Lake Road. There were no injuries and no animals were in the barn. Barn was severely damaged. |
| 3/30/76 | 1410 | F3 | 44/08'N / 84/13'W 44/10'N / 84/12'W | 0 | 0 | 6mi long, 117yd wide* |
| Moved N from 6mi N of Prescott to 1mi N of South Branch. A town hall and 2 barns were destroyed S of M-55. On the east edge of Sage Lake, 35 homes, cabins, and cottages were damaged or destroyed. A death occurred in Ogemaw County as a small home was carried 200ft and dropped. The funnel lifted near Laird Lake and then dipped south of Dollar Lake. | | | | | | |
| 6/18/76 | 1830 | F1 | 43/49'N / 84/22'W | 0 | \$25K | 1mi long, 33yd wide |
| 7/23/79 | 1615 | F0 | 43/53'N / 84/27'W | 0 | \$25K | 0mi long, 17yd wide |
| 5/12/00 | 1536 | F0 | 44/11'N / 84/12'W 44/12'N / 84/11'W | 0 | 0 | 2mi long, 20yd wide A tornado briefly touched down in far northeast Gladwin County and crossed into Arenac County lifting near interstate 75. Thunderstorms developed across Northern Lower Michigan in unseasonably warm and humid air ahead of a strong cold front that was moving across the Great Lakes Region. Thunderstorms developed during the late afternoon and lasted through the evening. Most of these storms produced very heavy rain and hail. The heavy rainfall also produced some street flooding in the cities of Manistee and Cadillac. A few of these storms produced severe wind gusts. An isolated tornado was reported across the Gladwin-Arenac County line; however, the hail and flooding had the greatest impact. |

6/09/01 1735 F1 44/04'N / 84/29'W 0 \$90K 3mi long, 30yd wide
44/03'N / 84/24'W

Tornado damaged several buildings and numerous trees. During the late afternoon hours of June 9th, a small cluster of thunderstorms developed along a lake breeze boundary near the city of Cheboygan. This cluster of storms continued to move southeast along the lake breeze boundary before moving into Lake Huron near Harrisville. These storms dropped large amounts of hail that covered the ground to an inch or two at times. A more widespread area of thunderstorms developed further south, affecting Gladwin, Iosco and Ogemaw counties. These storms also produced considerable amounts of hail. A tornado was reported about 6 miles north of the town of Gladwin and moved east to 6 miles northeast of town, damaging six structures and destroying one. There were also numerous trees downed. The tornado remained in Gladwin County through its entire life cycle, with three individual touchdowns noted.

GRAND TRAVERSE COUNTY (4)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|---|-------------|------------|--|------------|---------------|------------------------|
| 4/3/56 | 1915 | F4 | 44/43'N / 85/48'W 44/53'N / 85/35'W | 0 | \$250K | 15mi long, 400yd wide* |
| 13 homes destroyed along with at least twice that many barns. Moved NE from Portage Point to NW of Thompsonville. A couple died as the second floor was torn off their home. Homes were destroyed at Lake Ann, SE of Solon, and at Cedar Run. Barn leveled at Bear Lake. | | | | | | |
| 9/13/61 | 1512 | F2 | 44/46'N / 85/30'W 44/46'N / 85/12'W | 0 | \$25K | 14mi long, 33yd wide* |
| Passed 3mi E of Traverse City...near Bates. Touched down multiple times...about every 3 miles. Barnes were destroyed along with 300 cherry trees. | | | | | | |
| 5/08/64 | 2126 | F2 | 44/54'N / 85/32'W 44/58'N / 85/12'W | 0 | \$250K | 17mi long, 440yd wide |
| (Per local newspaper article) Across Old Mission Peninsula and Antrim County smashing barns, 1 house, other buildings and countless trees. | | | | | | |
| Barn, four worker cabins flattened, 1 ½ ton truck carried more than 15 yards and dumped upside down. A spraying laden with 500 gallons of water spun around. Cottage demolished. Sugar house, roadside stand and garage demolished. Hail winds up to 70mph, lightning, numerous (100+) cherry trees destroyed house near Grand Traverse/Benzie County line (west of Interlochen) damaged by fire believed triggered by lightning. | | | | | | |
| 6/26/69 | 1430 | F3 | 44/45'N / 85/40'W 44/49'N / 85/34'W | 0 | \$250K | 6mi long, 600yd wide* |
| Moved NE from 15mi SW of Traverse City. A home and 3 barns destroyed. 16 other building badly damaged. Near F-4 damage as little remained of one house and barn. | | | | | | |

IOSCO COUNTY (12)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|---|-------------|------------|--|----------------|---------------|------------------------|
| 6/08/53 | 1940 | F2 | 44/20'N / 83/38'W 44/27'N / 83/20'W | 4dead 13inj | \$250K | 17mi long,833yd wide* |
| Moved ENE from Indiana Lake to Lake Huron. 5 vacation "cabins" were leveled and 6 others were badly damaged. 4 in one family were killed in a cabin on Big Island Lake. | | | | | | |
| 3/30/76 | 1505 | F1 | 44/23'N / 83/51'W | 0 | \$25K | 3mi long, 83yd wide |
| 8/05/77 | 1630 | F1 | 44/17'N / 83/48'W 44/17'N / 83/43'W | 0 | \$25K | 3mi long, 70yd wide |
| 8/31/77 | 1730 | F1 | 44/22'N / 83/46'W 44/23'N / 83/43'W | 0 | \$25K | 2mi long, 100yd wide |
| 6/29/81 | 1540 | F1 | 44/21'N / 83/52'W 44/23'N / 83/45'W | 0 | \$25K | 6mi long, 33yd wide |
| 6/20/82 | 1457 | F1 | 44/17'N / 83/53'W 44/18'N / 83/51'W | 0 | \$250K | 2mi long, 70yd wide |
| 6/22/82 | 1603 | F0 | 44/20'N / 83/44'W | 0 | \$0.3K | 0mi long, 10yd wide |
| 5/19/83 | 1900 | F0 | 44/23'N / 83/50'W | 0 | \$25K | 0mi long, 7yd wide |
| 3/27/91 | 1820 | F3 | 44/23'N / 83/54'W 44/30'N / 83/41'W | 0 | \$2.5M | 10mi long, 100yd wide* |
| Moved NE from 1mi W of Sage Lake, passing 3mi N of Hale, ending 2mi S of Harrisville near the Lake Huron Shore. The tornado was on the ground about 60% of the time, destroying several homes and many trees. | | | | | | |
| 3/27/91 | 1833 | F3 | 44/27'N / 83/53'W 44/30'N / 83/48'W | 0 | \$2.5M | 4mi long, 100yd wide* |
| Moved NE from Trout Lake, passing 0.5mi E of Glennie, and ending 3mi SE of Barton. Homes were destroyed east of Glennie.. Cars and farm vehicles were crushed by trees. | | | | | | |
| 6/17/92 | 1625 | F1 | 44/31'N / 83/48'W | 0 | 0 | 1mi long, 20yd wide |
| 5/28/95 | 1814 | F1 | 43/04'N / 82/42'W 43/04'N / 82/42'W | 0 | \$5K | 1mi long, 10yd wide |
| A tornado touched down and remained on the ground for a couple of minutes. While on the ground it destroyed a small barn, peeled siding off of a house, and destroyed a high voltage tower. | | | | | | |

KALKASKA COUNTY (6)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 7/03/74 | 0130 | F1 | 44/45'N / 84/11'W 44/49'N / 84/05'W | 0 | \$2.5K | 6mi long, 33yd wide |
| 6/15/76 | 1835 | F1 | 44/32'N / 85/19'W 44/33'N / 85/18'W | 0 | \$25K | |
| 7/23/76 | 1940 | F2 | 44/34'N / 85/15'W 44/35'N / 85/10'W | 5inj | \$25K | 3mi long, 83yd wide |
| 7/17/94 | 1708 | F0 | South Boardman | 0 | 0 | 0mi long, 20yd wide A fire department spotter observed a tornado as it touched down in an open field. No damage was reported. |
| 5/31/98 | 0450 | F1 | 44/45'N / 85/12'W 44/48'N / 85/05'W | 0 | 0 | 7mi long, 100yd wide A tornado intermittently on the ground for around 7 miles destroyed one mobile home and damaged 2 others. The combination of tornadic and straight-line winds also downed numerous trees. |
| 6/25/98 | 1910 | F0 | 44/45'N / 85/08'W 44/45'N / 85/08'W | 0 | 0 | 0mi long, 30yd wide Brief tornado touchdown with no reported damage. |

LEELANAU COUNTY (2)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|----------------------|
| 7/31/77 | 0115 | F1 | 44/53'N / 85/59'W 44/56'N / 85/49'W | 0 | \$25K | 8mi long, 167yd wide |
| 8/15/78 | 0020 | F? | 44/59'N / 85/41'W 45/01'N / 85/37'W | 0 | \$250K | 2mi long, 160yd wide |

MACKINAC COUNTY (3)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|-------------------|------------|---------------|--------------------------------------|
| 7/14/84 | 2142 | F2 | 46/11'N / 85/53'W | 1 inj | \$25K | 9mi long 100yd wide |
| 8/16/88 | 2200 | F1 | 46/06'N / 85/24'W | 0 | 0 | 1mi long, 60yd wide |
| 7/13/95 | 1240 | F? | Cut River Bridge | 0 | 0 | 0mi long, 10yd wide (unconfirmed) |

MANISTEE COUNTY (1)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|------------------------|
| 4/03/56 | 1835 | F4 | 44/22'N / 86/14'W 44/31'N / 86/05'W | 0 | \$250K | 13mi long, 400yd wide* |

13 homes destroyed along with at least twice that many barns. Moved NE from Portage Point to NW of Thompsonville. A couple died as the second floor was torn off their home. Homes were destroyed at Lake Ann, SE of Solon, and at Cedar Run. Barn leveled at Bear Lake.

MISSAUKEE COUNTY (7)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|--|
| 8/20/55 | 1210 | F0 | 44/25'N / 85/02'W 44/35'N / 84/47'W | 0 | \$2.5K | 17mi long, 80yd wide |
| 9/03/64 | 2004 | F2 | 44/19'N / 85/12'W | 0 | \$250K | The roof of the Missaukee County road commission office was lifted off. |
| 7/07/80 | 2203 | F0 | 44/14'N / 85/17'W | 0 | 0 | Public reported tornado near the town of Lucas, on Jennings Road and Stoney Corners Road. No reported damage. |
| 7/21/83 | 1022 | F1 | 44/17'N / 85/13'W 44/13'N / 85/03'W | 0 | \$0.3K | 9mi long, 30yd wide A tornado downed and twisted several trees in the town of Falmouth. Hundreds more of uprooted trees were reported along a path to Vogel Center. |
| 6/17/94 | 1830 | F0 | 44/25'N / 85/16'W | 0 | \$5K | 0mi long, 30yd wide A small tornado touched down, for less than 30 seconds, along LaChance Road in western Missaukee County. This was about two miles from the Wexford County line. A farm house received structural damage to one corner of the roof. A full livestock feeder was lifted and moved about 100 yards. Although a funnel was not observed on the ground, a funnel cloud was seen by a neighbor over the farm at the precise time that the damage occurred. Pea-size hail and brief heavy showers occurred prior to the tornado. |
| 7/17/94 | 1639 | F0 | 44/19'N / 84/56'W | 0 | \$5K | 0mi long, 20yd wide A tornado touched down at the intersection of M-55 and Merritt Road in the town of Merritt. Two pick-up trucks, in a parking lot at the intersection, were severely sandblasted on all sides by gravel that was picked up by the tornado. One truck had the rear window sucked out and thrown across the parking lot. Total time on the ground was about two minutes and no other damage was noted. Numerous other funnel clouds were sighted across the southern portion of the county on this afternoon and evening. |
| 5/31/98 | 0430 | F0 | 44/17'N / 85/09'W | 0 | 0 | 0mi long, 100yd wide A tornado on the ground for around 500 yards snapped off numerous trees about 5 feet above the ground. |

MONTMORENCY COUNTY (5)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|-------------------|------------|---------------|---|
| 6/14/57 | 1830 | F1 | 44/58'N / 84/22'W | 0 | \$25K | 1mi long, 50yd wide (Per local newspaper article) 3 cabins damaged, one de-roofed. "Fish were falling north of Hillman undoubtedly picked up in twister at Gaylanta Lake". Many dead fish were reported banked on the island at the lake. Northeasterly from Lewiston toward Atlanta lasting 7 minutes. Numerous trees downed. |
| 7/17/82 | 1135 | F0 | 44/55'N / 84/10'W | 0 | \$2.5K | 1mi long, 17yd wide |
| 7/17/82 | 1135 | F0 | 44/54'N / 84/11'W | 0 | \$2.5K | 0mi long, 67yd wide |
| 5/19/98 | 1605 | F0 | 44/58'N / 84/06'W | 0 | 0 | 0mi long, 30yd wide |
| 7/3/99 | 1821 | F1 | 44/52'N / 84/16'W | 0 | \$60K | 1mi long, 60yd wide 60 yard wide swath of trees snapped off 8 feet above the ground. 3 homes damaged. Several mobile homes damaged. (Per local newspaper article) Trees downed in Lewiston near Wolf Lake Road. |

OGEMAW COUNTY (10)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|---|-------------|------------|--|---------------|---------------|--|
| 4/12/74 | 1955 | F2 | 44/10'N / 83/56'W | 0 | \$2.5K | 1mi long, 100yd wide (Per local newspaper article) Barn demolished along with garage, broken trees |
| 3/30/76 | 1415 | F3 | 44/10'N / 84/12'W 44/20'N / 84/09'W | 10inj | \$250K | 11mi long, 100yd wide* |
| Moved NNE from 5mi SW of Alger to 10mi E of Rose City. This tornado first destroyed 2000 trees in the Tittabawassee National Forest. It crossed I-75 and blew vehicles from the road, injuring 4 people. The tornado leveled a small home and a store on Peach Lake Road. Curving E, it hit east of Peach Lake and damaged 10 more homes. | | | | | | |
| 3/30/76 | 1440 | F3 | 44/16'N / 83/56'W 44/22'N / 83/55'W | 1dead 7inj | \$250K | 6mi long, 117yd wide* |
| Moved N from 6mi N of Prescott to 1mi N of South Branch. A town hall and 2 barns were destroyed S of M-55. On the east edge of Sage Lake, 35 homes, cabins, and cottages were damaged or destroyed. The death occurred as a small home was carried 200ft and dropped. The funnel lifted near Laird Lake and then dipped south of Dollar Lake. | | | | | | |
| 6/20/82 | 1440 | F1 | 44/14'N / 84/03'W 44/17'N / 83/53'W | 1inj | \$250K | 7mi long, 70 yd wide |
| (Per local newspaper article) Cars from auto business strewn up to 1/4 mile away. Porch torn off, siding torn off and trees demolished. Roof lifted off Mackinaw Land and Cattle Co. cattle barn. Damage to barns reported by several farmers. | | | | | | |
| 6/13/84 | 1510 | F1 | 44/21'N / 83/56'W | 0 | \$250K | 1mi long, 37yd wide (Per local newspaper article) Sage Lake area near Campbell and Peters Roads in Hill Twp. 2 homes nearly completely destroyed, roof ripped off, 1 home damaged. Scores of trees snapped. |
| 3/27/91 | 1815 | F3 | 44/20'N / 83/58'W 44/23'N / 83/54'W | 0 | \$2.5M | 2mi long, 100yd wide* |
| Moved NE from 1mi W of Sage Lake, passing 3mi N of Hale, ending 2mi S of Harrisville near the Lake Huron Shore. The tornado was on the ground about 60% of the time, destroying several homes and many trees. | | | | | | |
| 3/27/91 | 1815 | F2 | 44/15'N / 84/16'W 44/19'N / 84/05'W | 3inj?? | \$250K | 6mi long, 100yd wide* |
| Moved NE from 3mi SW of West Branch to 1mi W of Selkirk. A house under construction and several garages were destroyed. Barnes collapsed. | | | | | | |
| 3/27/91 | 1820 | F3 | 44/29'N / 84/03'W 44/30'N / 84/05'W | 0 | \$2.5M | 7mi long, 100yd wide * |
| Moved NE from Trout Lake, passing 0.5mi E of Glennie, and ending 3mi SE of Barton. Homes were destroyed east of Glennie.. Cars and farm vehicles were crushed by trees. | | | | | | |

4/24/93 1822 F2 44/09'N / 84/08'W 3inj \$50K 7mi long, 440yd wide
44/13'N / 83/55'W

A tornado touched down in Alger in extreme northwest Arenac County around 1822 EST. The tornado moved northeast and lifted briefly after crossing Highway M-33. The tornado touched down with greater strength just before crossing into Ogemaw County where the Rifle River crosses the Ogemaw/Arenac County line. The tornado then moved into Mills Township/Skidway Lake through a subdivision comprised mainly of mobile homes and cottages, reaching F2 strength. It lifted briefly, about 0.75 mile northeast of the river, then touched down again and traveled another 6 miles, moving out of dense woods and into mostly open fields. A total of 17 mobile homes, 3 homes or cottages, 7 travel trailers, 4 garages, a barn, and 3 vehicles were destroyed or badly damaged. Six people, in 3 of the mobile homes that were completely destroyed, were warned by the approaching roar. In each case, they took some action that ultimately saved their lives. Three were hospitalized with injuries. The tornado lifted just west of Prescott. Tree and power line damage occurred with the tornado itself, and up to 0.1 mile either side of the tornado path. Structure damage and personal property loss in Ogemaw County is estimated at around \$250,000, with another \$110,000 in tree damage or loss.

7/06/94 1720 F1 44/11'N / 84/17'W 0 \$5K 0mi long, 50yd wide

Tornado touched down at a residence on the south side of Greenwood Road one-half mile west of M-30 in southeast Edwards Township. The tornado touched down momentarily, 18 feet from the residence, and carried away a 16-foot aluminum boat, a lawnmower, and a 10 X 12 feet aluminum storage shed/workshop and all contents. The residence sustained only minor damage on the north side, apparently from inflow field winds picking up small gravel from the edge of Greenwood Road and firing it through the vinyl siding of the residence. Only small portions of the shed were found spread across a field extending 0.3 mile east-southeast. Heavy hand tools from the shed were found along highway M-30, 0.6 mile east-southeast, on the far side of a one-quarter mile wide stand of mature, 60 to 70-foot high hardwoods. The boat, lawnmower, and remainder of shed and contents remain missing.

5/06/95 1301 DD 9mi ESE West Branch 0 \$0.5K

A dust devil developed 100 to 125 feet from the west side of Lake Ogemaw. As the vortex moved southeast toward a local marina along the shore, it lifted a section of a dock 20 to 30 feet in the air and hurled it 155 feet to the southwest, where it landed on top of a local convenience store, puncturing the roof. The feature became a waterspout as it continued to move southeast across Lake Ogemaw.

Witnesses observed water being lifted 20 to 30 feet by the time the waterspout was half way across the lake, at which point it began to weaken. Once it reached the southeast shore of the lake, the vortex strengthened briefly before dissipating in a nearby forest. There was no resultant tree damage. All totaled, the vortex traveled approximately one-quarter mile in four minutes. The sky was completely free of clouds at the time of the event.

6/25/98 1023 F0 44/17'N / 84/13'W 0 0 0mi long, 30yd wide
Brief tornado touchdown w/ no reported damage.

OSCODA COUNTY (5)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|--|
| 7/09/87 | 1420 | F1 | 44/48'N / 84/21'W 44/49'N / 84/17'W | 0 | \$0.3K | 4mi long, 13yd wide |
| 4/24/93 | 1740 | F1 | 44/49'N / 84/19'W | 0 | \$50K | 0mi long, 10yd wide A brief tornado touchdown was evident in tree damage pattern along the north shore of Snyder Lake. No structural damage was noted with this tornado. The tornado occurred in a wooded area. |
| 5/28/95 | 1455 | F2 | 44/34'N / 84/08'W | 0 | 0 | 1mi long, 0.5mi wide A weak F2 tornado developed in the Huron National Forest and moved across M-33 approximately five miles south of Mio. The path of the tornado was determined to be one-mile-long and 0.5-mile-wide. Numerous trees along the path were snapped off at 5 to 10 feet above the ground, while others were totally uprooted. The affected trees ranged from 6 to 20 inches in diameter, and as tall as 60 feet. |
| 7/02/97 | 1410 | F1 | 44/35'N / 84/19'W 44/35'N / 84/08'W | 0 | 0 | 10mi long, 150yd wide This was a continuation of the tornadic thunderstorm that crossed Crawford county. The thunderstorm maintained its pattern of producing straight-line along its entire path with occasional brief tornado touch downs. One touch down point was around 1/4 mile south of Luzerne. Inflow into the tornado caused extensive damage to trees on the south side of Luzerne. The final touch down point was 5 miles south of Mio where a single home was destroyed. The combination of straight-line and tornadic winds severely damaged or destroyed nearly 2000 acres of timber in the Huron National Forest. This was a strong F1 tornado. |
| 7/03/99 | 1825 | F2 | 44/52'N / 84/09'W 44/46'N / 83/55'W | 2 inj | \$1.5M | 1mi long, 60yd wide 60 yard wide swath of trees snapped off 8 feet above the ground. 3 homes damaged. Several mobile homes damaged. |

OTSEGO COUNTY (2)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|--|
| 7/11/69 | 0030 | F? | 44/56'N / 84/42'W | 0 | \$25K | 1mi long, 50yd wide (Per local newspaper article) 1 person unidentified - person may have been injured in a tornado which cut a swath along east short of Bradford Lake, 12x60 foot Mobile Home destroyed. Moved southeast across Old 27 leaving trees and underbrush across Penn Central Railroad and highway. Proceeding to Lake Marjory State Forest Campground damaging trailers and uprooting large trees. Golf sized hail reported. |
| 7/03/74 | 2130 | F3 | 45/04'N / 84/51'W 45/03'N / 84/48'W | 0 | \$250K | (Per local newspaper article) News accounts of 2 injured - 14 year old female and 16 year old female. Chicken coop destroyed (girls were inside when it collapsed). 30 chickens killed, Metal pole type structure destroyed and spread about 10 acre area, trees and branches down. |

PRESQUE ISLE COUNTY (7)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---|
| 7/04/57 | 1700 | F2 | 45/14'N / 83/57'W | 0 | \$25K | 5mi long, 100yd wide,* Moved east-southeast passing near Hawks, Metz, and Posen. 3 barns destroyed. |
| 5/08/64 | 2258 | F2 | 45/18'N / 83/53'W 45/29'N / 83/37'W | 0 | \$250K | 18mi long, 400yd wide, * Grocery store in Hawks destroyed. Many barns destroyed. |
| 7/28/64 | 2015 | F1 | 45/25'N / 83/48'W | 1 INJ | \$25K | 0mi long, 133yd wide |
| 8/08/86 | 1140 | F1 | 45/25'N / 83/50'W | 0 | \$2.5K | 2mi long, 20yd wide |
| 8/12/88 | 1225 | F1 | 45/18'N / 84/14'W 45/18'N / 84/16'W | 0 | 0 | 1mi long, 40yd wide |
| 6/15/01 | 1530 | F0 | 45/16'N / 83/43'W | 0 | 0 | 0mi long, 10yd wide Brief touchdown lifted truck off ground, blew off barn doors and downed a few large trees. |
| 8/01/02 | 1702 | F0 | Black Lake Bluffs | 0 | 0 | 1 mile long, 20yd wide Tornado developed over Black Lake and moved onshore near Black Lake Bluffs. Many trees downed and at least three pontoon boats flipped. |

ROSCOMMON COUNTY (8)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|---------------------|
| 8/05/68 | 2000 | F1 | 44/20'N / 84/40'W 44/20'N / 84/33'W | 0 | \$2.5K | 5mi long, 50yd wide |

(Per local newspaper article) Waterspout formed by two funnels on north side of Houghton Lake, moved east lifting near Prudenville, funnel touched down near Trails End Dr., damaging docks, trees and boats.

| | | | | | | |
|---------|------|----|-------------------|---|--------|--|
| 5/25/73 | 2000 | F2 | 44/22'N / 84/44'W | 0 | \$0.3K | |
|---------|------|----|-------------------|---|--------|--|

(Per local newspaper article) Tornado touched down at Almeda Beach on Higgins Lake damaging a utility pole and wire disrupting service.

| | | | | | | |
|---------|------|----|-------------------|---|--------|---------------------|
| 6/10/74 | 0101 | F2 | 44/28'N / 84/44'W | 0 | \$2.5K | 0mi long, 50yd wide |
|---------|------|----|-------------------|---|--------|---------------------|

(Per local newspaper article) No injuries or serious damage to homes reported. Numerous trees were broken off. At least 1 Oak 3 feet in diameter and a slightly smaller red pine as it cut a 50 yard swath through woods on southwest side of County Road 200. Roof damage at home where 2 of 3 large birch trees were broken off on the westerly side of property.

| | | | | | | |
|---------|------|----|-------------------|---|--------|---------------------|
| 6/17/75 | 1420 | F0 | 44/20'N / 84/47'W | 0 | \$2.5K | 0mi long, 50yd wide |
|---------|------|----|-------------------|---|--------|---------------------|

| | | | | | | |
|----------|------|----|-------------------|---|---|---------------------|
| 10/14/89 | 0928 | F0 | 44/26'N / 84/46'W | 0 | 0 | 0mi long, 70yd wide |
|----------|------|----|-------------------|---|---|---------------------|

| | | | | | | |
|---------|------|----|-------------------|---|--------|---------------------|
| 6/17/92 | 1500 | F1 | 44/18'N / 84/39'W | 0 | \$250K | 1mi long, 20yd wide |
|---------|------|----|-------------------|---|--------|---------------------|

(Per local newspaper article) Numerous trees downed, flooding. 3 inches in some buildings. Roscommon Middle School reported a 6" storm drain cover gave way under force of the water. Water spurted from opening creating 3" deep lake in school office library and several classrooms. Dozen computers being stored on the library floor for summer damaged by the water (damage unknown). In addition, water seeped into boxes of 300-400 books scheduled for rebinding.

| | | | | | | |
|---------|------|----|---|---|--------|---------------------|
| 6/17/92 | 1500 | F1 | 44/18'N / 84/39'W 6mi NW Houghton Lake | 0 | \$250K | 1mi long, 20yd wide |
|---------|------|----|---|---|--------|---------------------|

A funnel developed beneath a strong thunderstorm over the north portion of Houghton Lake, touching down several hundred feet offshore and moving onshore as a waterspout at 1747 EDT. Three pontoon boats were flipped and badly damaged and several docks were damaged or destroyed. Now a tornado, it continued onshore doing widespread tree damage in a 150-foot wide swath, with approximately 20 large pines and hardwoods uprooted or snapped off. Minor structural damage occurred to four or five cottages and homes, mainly from trees and flying debris. Continuing a northwest path, the tornado skipped and caused more tree damage as it moved across the north end of Long Point. As the tornado again approached the water, it touched down strongly at 1750 EDT, again doing widespread tree and minor structural damage to approximately 40 trees and six to eight homes and cottages. Six more pontoon boats and several docks were damaged or destroyed as the feature moved offshore as a waterspout, which continued northwest across Houghton Lake's North Bay for nearly two miles before dissipating near the lake outflow into the Muskegon River.

| | | | | | | |
|---------|------|----|-------------------|---|---|---------------------|
| 6/28/95 | 1713 | F? | 8mi WSW Roscommon | 0 | 0 | 0mi long, 10yd wide |
|---------|------|----|-------------------|---|---|---------------------|

Skywarn spotters observed a funnel that dropped close to the ground. While the funnel never made visible contact with the ground, a rotating, lifting cloud of dirt and debris developed briefly beneath it.

WEXFORD COUNTY (6)

| <u>DATE</u> | <u>TIME</u> | <u>MAG</u> | <u>LAT/LON</u> | <u>CAS</u> | <u>DAMAGE</u> | <u>REMARKS</u> |
|-------------|-------------|------------|--|------------|---------------|----------------------|
| 7/31/63 | 1840 | F2 | 44/18'N / 85/24'W 44/04'N / 85/10'W | 0 | \$250K | 20mi long, 50yd wide |
| 8/04/68 | 1845 | F1 | 44/12'N / 85/24'W | 0 | \$2.5K | 0mi long, 20yd wide |
| 6/07/74 | 2222 | F2 | 44/14'N / 85/28'W | 1inj | \$25K | 1mi long, 70yd wide |
| 6/15/76 | 1830 | F1 | 44/30'N / 85/20'W 44/32'N / 85/19'W | 0 | \$25K | |
| 7/07/80 | 2158 | F0 | 44/18'N / 85/28'W | 0 | 0 | |
| 10/15/89 | 0835 | F1 | 44/30'N / 85/40'W | 0 | \$250K | 1mi long, 40yd wide |

